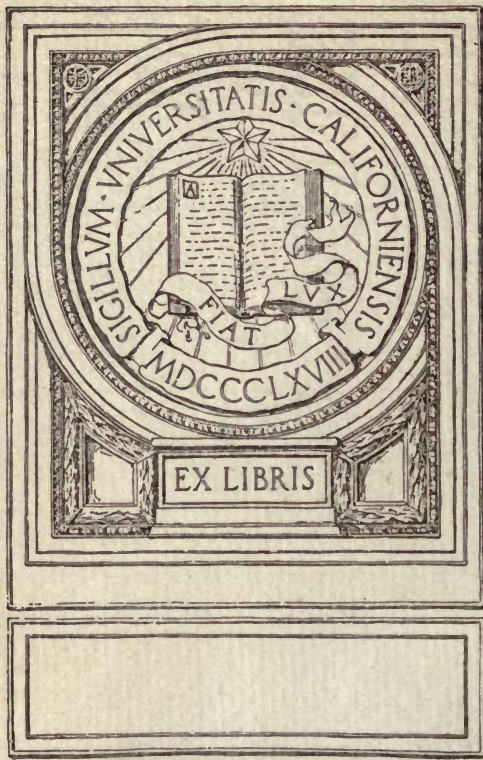


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LIST OF REFERENCES ON STORAGE BATTERIES, 1900-1915

COMPILED BY GEORGE S. MAYNARD

Bibliography presented for graduation, Library School of The New York Public Library, 1915

The list includes books and periodical articles that have appeared since the beginning of 1900. The arrangement is chronological by date of publication. Author and subject indexes are appended.

References have not been made to patent abstracts, nor, in general, to "trade" descriptions or articles of minor importance; nor have references been taken from the periodical "Centralblatt für Accumulatoren- und Galvanotechnik," which should be consulted in its entirety.

A few works not in The New York Public Library have been included in this list; these are in either the Columbia University Library or the Library of the United Engineering Societies, and are indicated, respectively, by the words Columbia and Eng. Lib. following the entry.

1900

1. **Accumulateur** Heinz. illus. (L'électricien, Paris, v. 20, Nov. 24, 1900, p. 323-325.) **VGA**

2. **Accumulateur** Van Kampen. (L'éclairage électrique, Paris, v. 23, May 5, 1900, p. 172.) **VGA**

3. **Accumulateurs** Commelin et Viau à gaz sous pression. illus. (L'éclairage électrique, Paris, v. 23, June 23, 1900, p. 452-454.) **VGA**

Also in L'électricien, Paris, v. 20, Oct. 13, 1900, p. 227-230, *VGA*.

4. **Accumulateurs** Commelin et Viau, légers et à haute tension. illus. (L'éclairage électrique, Paris, v. 23, June 23, 1900, p. 454-456.) **VGA**

Also in L'électricien, Paris, v. 20, Nov. 3, 1900, p. 382-384, *VGA*.

Cell has metallic salt electrolyte and lead peroxide anode.

5. **Akunoff**, Iwan. Zur Thermodynamik der Chlor-Knallgaskette. (Zeitschrift für Electrochemie, Halle, Jahrg. 7, Dec. 6, 1900, p. 354-356.) **PKA**

Thermodynamics of the hydrogen-chlorine gas cell.

6. **Beckmann**, H. Sur un nouveau procédé de formation autogène des plaques d'accumulateurs. (L'éclairage électrique, Paris, v. 25, Oct. 6, 1900, p. 47-48.) **VGA**

Abstracted in Electrical world and engineer, New York, v. 35, May 19, 1900, p. 755, *VGA*.

7. **Blondin**, J., and A. BAINVILLE. Accumulateurs pour automobiles électriques. (Le concours international de l'automobile-club.) illus. (L'éclairage électrique, Paris,

v. 22, p. 57-64, 130-137, 171-177, 289-292, 336-342.) **VGA**

Abstracted in Electrical world and engineer, New York, v. 35, Feb. 10, 1900, p. 224, *VGA*.

Gives a complete report of an elaborate series of tests.

8. **Dolezalek**, Friedrich. Contribution à la théorie de l'accumulateur au plomb. (L'éclairage électrique, Paris, v. 23, June 30, 1900, p. 499-502.) **VGA**

9. — Ueber den Temperaturkoeffizienten des Blei-Akkumulators. (Zeitschrift für Elektrochemie, Halle, Jahrg. 6, April 19, 1900, p. 517-519, May 17, p. 557.) **PKA**

Abstracted in Electrical world and engineer, New York, v. 35, May 19, 1900, p. 755-756, *VGA*.

10. **Ferguson**, Louis A. Storage batteries for small stations. illus. (Western electrician, Chicago, v. 27, July 7, 1900, p. 2-3.) **VGA**

11. **Gérard**, Eric. Piles secondaire ou accumulateurs. illus. (In his: Leçons sur l'électricité. 6. ed. Paris: Gauthier-Villars, 1900. 8°. p. 405-438.) **Columbia**

12. **Girault**, Paul. Couplage d'accumulateurs. Sur la charge en parallèle de deux demi-batteries d'accumulateurs et leur décharge en tension. (Industrie électrique, Paris, v. 9, Sept. 25, 1900, p. 402-404.) **VGA**

13. **Hanchett**, George T. The selection of a storage battery for an automobile. (American electrician, New York, v. 12, June, 1900, p. 297-298.) **VGA**

Calculation of the watt-hours required for a given weight and speed.

14. **Heim**, C. Ueber die Ladung von Akkumulatoren bei konstanter Spannung. (Elektrotechnische Zeitschrift, Berlin,

1900, continued.

Jahrg. 21, 1900, p. 269-272, 288-290, 309-312, 329-331, 347-349, 391-394, 416-419, 438-441, 463-465, 487-491, 504-507.) **VGA**

15. Helbig, D. Sur les émanations des accumulateurs. (L'éclairage électrique, Paris, v. 23, May 5, 1900, p. 174.) **VGA**

16. Jumau, L. Sur l'emploi d'une électrode supplémentaire dans les recherches sur l'accumulateur électrique. illus. (L'éclairage électrique, Paris, v. 24, July 14, 1900, p. 59-65.) **VGA**

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17. Jungner, Ernst W. Ein primär wie sekundär benutzbares galvanisches Element mit Elektrolyten von unveränderlichen Leitungsvermögen. (Elektrochemische Zeitschrift, Berlin, Jahrg. 7, Aug., 1900, p. 102-104.) **PKA**

18. Kohn, M. Graphische Ermittlung der Leistung von Pufferbatterien. (Elektrotechnische Zeitschrift, Berlin, Jahrg. 21, Jan. 25, 1900, p. 78-80.) **VGA**

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19. Lead-zinc accumulators. (American electrician, New York, v. 12, Jan., 1900, p. 29.) **VGA**

"Leitner cell."

20. Loewit, Arthur. Sektionsschalter für Akkumulatorenladung. (Elektrotechnische Zeitschrift, Berlin, Jahrg. 21, Aug. 2, 1900, p. 640-641.) **VGA**

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21. Macrae, Roderick. The regulation of storage battery voltage. illus. (Electrical world and engineer, New York, v. 35, March 24, 1900, p. 431-433.) **VGA**

22. Majert accumulator. illus. (American electrician, New York, v. 12, Jan., 1900, p. 29.) **VGA**

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Some features of construction.

23. Martin, H. S. The E. P. storage battery. illus. (Electrical world and engineer, New York, v. 35, April 28, 1900, p. 635-636.) **VGA**

24. Michelis, B. von. Berechnung der Akkumulatoren und Betriebsmaschinen für Elektrizitätswerke. (Journal für Gasbeleuchtung, Munich, Jahrg. 43, July 28, 1900, p. 576-579, Aug. 4, p. 595-598.) **VOA**

25. Nernst, W., and FRIEDRICH DOLEZALEK. Ueber die Gaspolarisation im Bleiakкумуляtor. (Zeitschrift für Electrochemie, Halle, Jahrg. 6, May 10, 1900, p. 548-550.) **PKA**

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26. Norden, Konrad. Ueber eine Methode zur Bestimmung der wahren Oberflächen

von Akkumulatorenplatten. (Zeitschrift für Electrochemie, Halle, Jahrg. 6, 1900, p. 397-403, 444, 470.) **PKA**

Abstracted in Electrical world and engineer, New York, v. 35, March 3, 1900, p. 331, **VGA**.

Method of estimating ratio of true to apparent surface of accumulator plates.

27. Norris, H. H. Storage batteries in railway power stations. (Street railway review, Chicago, v. 10, Dec. 15, 1900, p. 733-736.) **†† TPB**

Describes tests made on the Buffalo plant.

28. Peters, Franz. Effect of sunlight on lead peroxide. (Electrician, London, v. 45, Oct. 19, 1900, p. 952.) **VGA**

29. — Experiments with accumulator plates. (Electrician, London, v. 45, May 18, 1900, p. 136-137.) **VGA**

Method of rehardening softened positive plates.

30. Reynolds, Edward L. Storage batteries in electric railway power stations. (American electrician, New York, v. 12, Oct., 1900, p. 474-475.) **VGA**

Advantages of battery installation as shown by tests at various plants.

31. Reyval, J. Accumulateurs Pollak. illus. (L'éclairage électrique, Paris, v. 24, Sept. 22, 1900, p. 442-447.) **VGA**

32. Rossander, C. A., and E. A. FORSBERG. Ueber die Vorausbestimmung der erforderlichen Kapazität von Akkumulatoren-batterien. (Elektrotechnische Zeitschrift, Berlin, Jahrg. 21, Oct. 25, 1900, p. 881-883.) **VGA**

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33. Schaerer, H. C. The electric accumulator. (Australian mining standard, Melbourne, v. 18, Nov. 29, 1900, p. 701-702.) **VHF**

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34. Schoop, M. U. Local discharges in the lead accumulator. (Electrical world and engineer, New York, v. 35, June 2, 1900, p. 834-835.) **VGA**

35. — Selbstthätige Lade- und Entladevorrichtung für Akkumulatoren. (Zeitschrift für Elektrotechnik, Wien, Jahrg. 18, Feb. 11, 1900, p. 77-78.) **VGA**

36. — Ueber Hochspannungs Akkumulatoren. illus. (Zeitschrift für Elektrotechnik, Wien, Jahrg. 18, Sept. 30, 1900, p. 478-479.) **VGA**

37. — Ueber Untersuchungen an Akkumulatoren. (Zeitschrift für Elektrotechnik, Wien, Jahrg. 18, Feb. 25, 1900, p. 101-106.) **VGA**

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38. **Sieg, E.** Ueber Pufferbatterien. (Elektrotechnische Zeitschrift, Berlin, Jahrg. 21, March 15, 1900, p. 226-228.) **VGA**
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40. **Strasser, and GAHL.** Ueber die Gas-polarisation im Bleiakкумуляtor. (Zeitschrift für Elektrochemie, Halle, Jahrg. 7, July 5, 1900, p. 11-13.) **PKA**

41. **Suchy, E.** Grössenbestimmung von Accumulatoren-Batterien. (Zeitschrift für Elektrochemie, Wien, Jahrg. 18, Dec. 16, 1900, p. 609-610.) **VGA**

Method of calculating the necessary size of a battery to provide for a demand that follows a certain load curve.

42. **Use of the storage battery in the theatre.** (American electrician, New York, v. 12, April, 1900, p. 166-167.) **VGA**

43. **Wade, E. J.** Storage battery problems. (Institution of Electrical Engineers. Journal, London, v. 29, 1900, p. 460-495, 524-530.) **VGA**

Abstracted in Electrician, London, v. 44, 1900, p. 777-781, 824-826, 858-859, **VGA**.

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Requirements of a battery for rapid charge and discharge.

45. **White, L. G.** Desirability of using storage batteries in medium-size stations. (Western electrician, Chicago, v. 27, Aug. 25, 1900, p. 117.) **VGA**

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46. **Abel, E.** Beitrag zur Theorie des Akkumulators. (Zeitschrift für Elektrochemie, Halle, Jahrg. 7, June 27, 1901, p. 731-733.) **PKA**

Abstracted in L'éclairage électrique, Paris, v. 28, Sept. 14, 1901, p. 405-406, **VGA**.

47. **Abraham, A. J.** The maintenance of central station batteries. (Electrical review, London, v. 48, April 12, 1901, p. 620.) **VGA**

A criticism of the above by E. S. Jacob appears in the issue for April 19, p. 662-663.

48. **Accumulators and electric traction systems.** (Electrical review, London, v. 49, Dec. 13, 1901, p. 1025-1056.) **VGA**

Discusses the use of accumulators in power stations and at end of feeders.

49. **Allen, A. H.** The storage of electricity. illus. (Engineer, London, v. 91, May 31, 1901, p. 579-580, June 7, p. 605-606.) **VGA**

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50. **Automobile storage batteries.** illus. (Electrical world and engineer, New York, v. 38, Oct. 5, 1901, p. 538-545.) **VGA**

Detailed description of different makes.

51. **Bernbach, Willibald.** Die neuen Theorien des Bleiakкумуляtors. (Elektrotechnischer Anzeiger, Berlin, Jahrg. 18, 1901, p. 2-5, 33-34, 99-101, 235-237.) **Eng. Lib.**

52. **Blizard, Charles.** Development of the use of the storage battery in the United States. (Electrical review, New York, v. 38, Jan. 12, 1901, p. 75-76.) **VGA**

Brief historical account.

53. **Booth, W. H.** The accumulator as a source of economy in electric traction. (Electrical review, London, v. 48, Jan. 25, 1901, p. 140-142.) **VGA**

54. **Dolezalek, Friedrich.** Die theorie des Bleiakкумуляtors... Halle: W. Knapp, 1901. vi p., 1 l., 122 p. 8°. **Eng. Lib.**

— The theory of the lead accumulator; translated from the German by Carl L. von Ende. New York: J. Wiley & Sons, 1904. 241 p. 12°. **Eng. Lib.**

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Method for measuring the resistance of a cell.

56. **Fabre, Léonce.** Accumulateur L. F. Lacroix à grande capacité pour la traction. (L'éclairage électrique, Paris, v. 26, Jan. 5, 1901, p. 21-23.) **VGA**

57. **Fay, Thomas J.** Storage battery maintenance. (Electrical world and engineer, New York, v. 37, April 6, 1901, p. 550-551.) **VGA**

Tests for impurities in the electrolyte.

58. — Storage battery porosity. (Electrical review, New York, v. 38, May 18, 1901, p. 622-623.) **VGA**

59. **Fitz-Gerald, Desmond G.** The lead storage battery: its history, theory, construction and use. London: Biggs [1901]. 383 p. illus. 8°. **Columbia**

60. **Foerster, F.** Dynamo-elektrische Maschinen und Akkumulatoren. (In his: Die elektrotechnische Praxis. Berlin: L. Marcus, 1901. 12°. Bd. 1, p. 152-196.) **VGC**

61. **Gahl, Rudolf.** Der Edison-Akkumulator. (Zeitschrift für Elektrotechnik, Wien, Jahrg. 19, April 28, 1901, p. 205-206.) **VGA**

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62. Grindle, G. A. On the use of storage batteries in connection with electric tramways. (Institution of Electrical Engineers. Journal, London, v. 30, 1901, p. 1098-1127.) **VGA**

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63. Harrington, W. E. Storage batteries located in power stations. (Street railway review, Chicago, v. 11, Oct. 12, 1901, p. 726-729.) **†† TPB**

Read before the American Street Railway Association.

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64. Heim, C. Ein Verfahren zur Steigerung der Kapazität der Akkumulatoren. (Elektrotechnische Zeitschrift, Berlin, Jahrg. 22, Sept. 26, 1901, p. 811-815.) **VGA**

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65. Hibbert, W. On Mr. Edison's new accumulator. (Electrical review, London, v. 48, June 21, 1901, p. 1047.) **VGA**

Brief description.

66. — The Pascal Marino accumulator. illus. (Electrical review, London, v. 49, July 26, 1901, p. 131-132.) **VGA**

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67. Highfield, J. S. Storage batteries in electric power stations, controlled by reversible boosters. illus. (Institution of Electrical Engineers. Journal, London, v. 30, 1901, p. 1040-1096.) **VGA**

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68. Hopkinson, B. The losses of energy in accumulators. (Electrician, London, v. 48, Nov. 29, 1901, p. 211-214, Dec. 6, p. 263-264.) **VGA**

69. Hoppe, O. Die Pufferbatterie im Allgemeinen, im besonderer die der Aktiengesellschaft Thiederhall in Thiede bei Braunschweig. (Glückauf, Essen, Jahrg. 37, June 1, 1901, p. 477-489.) **VHA**

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70. Hull, R. C. Influence of storage batteries upon railway generating apparatus. (Electrical review, New York, v. 38, Jan. 19, 1901, p. 97-99.) **VGA**

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71. Jumau, L. Sur l'accumulateur fer-potasse peroxyde de nickel. Un nouveau brevet Edison. (L'éclairage électrique, Paris, v. 29, Oct. 19, 1901, p. 93-95.) **VGA**

72. — Sur le nouvel accumulateur Edison. illus. (L'éclairage électrique, v. 28, July 27, 1901, p. 124-130.) **VGA**

73. Kennelly, Arthur E. The new Edison storage battery. illus. (American Insti-

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74. Laszczynski, St. von. Neuere Arbeiten über Sammler aus anderen Metallen als Blei. (Zeitschrift für Elektrochemie, Halle, Jahrg. 7, Aug. 8, 1901, p. 821-827.) **PKA**

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75. Lees, S. The battery. (Electrical engineer, London, v. 28, Aug. 16, 1901, p. 235-236.) **VGA**

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76. Liagre, Charles. Influence de la température sur la capacité des accumulateurs au plomb. (L'éclairage électrique, Paris, v. 29, Nov. 2, 1901, p. 149-152.) **VGA**

77. Loppé, F. Les accumulateurs électriques. Paris: Masson [1901?]. 200 p. 2. ed. 12°. (Encyclopédie scientifique des aide-mémoires.) **Eng. Lib.**

78. Lunn, Ernest. Curves for showing the charge remaining in a storage battery. (American electrician, New York, v. 13, Sept., 1901, p. 436-437.) **VGA**

79. — Installation, operation and economy of storage batteries. illus. (Association of Engineering Societies. Journal, v. 26, April, 1901, p. 254-272.) **VDA**

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80. Lyndon, Lamar. Storage battery auxiliaries. (Electrical world and engineer, New York, v. 37, 1901, p. 972-974, 1015-1017, 1071-1073, 1112-1113; v. 38, p. 13-14, 64-65.) **VGA**

Treats of the various kinds of boosters.

81. — The storage battery in railway power station service. (Street railway journal, New York, v. 18, July 6, 1901, p. 18-22.) **TPB**

Data required for determining the necessary size of battery and boosters under given conditions.

82. Marsh, Albert L. An alkaline nickel-oxide cell. (Electrical world and engineer, New York, v. 38, July 27, 1901, p. 136.) **VGA**

83. Martin, T. Commerford. Storage batteries in central stations. (National Electric Light Association. Convention 24, 1901, p. 393-409.) **VGS**

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84. Morse, Franklin E. Application of the storage battery to the Brooklyn Heights railroad. (Street railway journal, New York, v. 18, Sept. 21, 1901, p. 340-342.) **TPB**

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85. Niblett, J. T. Improved traction accumulators. (Electrical review, London, v. 48, May 24, 1901, p. 885.) **VGA**

Plates made of a special compound of lead salts.

86. Norden, Konrad. Calculating the capacity of a battery for a given output. (Electrical world and engineer, New York, v. 37, March 9, 1901, p. 396-397.) **VGA**

A graphic method.

87. Palmer, R. L. The Cleveland and Chagrin Falls railroad's storage battery sub-station. illus. (Electrical review, New York, v. 38, April 27, 1901, p. 532-533.) **VGA**

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88. Peters, Franz. The new Edison storage battery. (Western electrician, Chicago, v. 29, July 20, 1901, p. 39.) **VGA**

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89. Pumpelly, J. K. The development of the storage battery. (Western electrician, Chicago, v. 28, May 11, 1901, p. 319.) **VGA**

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90. — Some notes on the copper cadmium storage battery. (Western electrician, Chicago, v. 28, May 4, 1901, p. 303.) **VGA**

91. Reed, C. J. Gas polarization in lead accumulators. (Electrical world and engineer, New York, v. 37, March 16, 1901, p. 451.) **VGA**

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Criticism of the article by Nernst and Dolezalek (1900).

92. Reynolds, Edward L. Storage batteries and 60 cycle railway rotaries. illus. (Street railway journal, New York, v. 18, Nov. 2, 1901, p. 670-672.) **TPB**

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93. Roeber, E. F. On theoretical concentration changes in the new Edison battery. (Electrical world and engineer, New York, v. 37, June 29, 1901, p. 1105-1108.) **VGA**

94. — Theory of the Edison nickel iron cell. (Electrical world and engineer, New York, v. 37, Oct. 1, 1901, p. 598-600, Dec. 7, p. 931-932.) **VGA**

95. Schindler, K. Die Wirkung des Eigengewichtes stationärer Akkumulatoren. (Elektrotechnischer Anzeiger, Berlin, Jahrg. 17, 1901, p. 273-275, 302-304.) **Eng. Lib.**

96. Schoop, M. U. Ueber den Einfluss der Säuretemperatur auf die Capacität des Bleiaccumulators. (Zeitschrift für Elektrotechnik, Wien, Jahrg. 19, 1901, p. 353-356, 362-364.) **VGA**

97. Schuchart, R. F. Storage batteries in central stations. (Electrical world and engineer, New York, v. 38, Aug. 17, 1901, p. 254.) **VGA**

Practical illustration of the value of batteries when the generators are shut down on account of an accident.

98. Seaman, Harold. Storage batteries in electric systems. (Wisconsin engineer, Madison, v. 5, Dec., 1901, p. 15-27.) **VDA**

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99. Sieg, E. Die Akkumulatoren. illus. (In: Handbuch der Elektrotechnik. Leipzig: S. Hirzel, 1901. 4°. Bd. 3, Abt. 2, 112 p.) **Eng. Lib.**

Treats of their development, manufacture, applications, etc.

100. Treadwell, Augustus, the younger. Storage batteries in central stations. (Electrical review, New York, v. 38, June 1, 1901, p. 692-696.) **VGA**

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101. — The storage battery. (Electrical world and engineer, New York, v. 37, Jan. 5, 1901, p. 38-40.) **VGA**

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102. Wade, E. J. Edison's alkaline storage batteries. (Electrician, London, v. 47, Aug. 23, 1901, p. 677-678.) **VGA**

- Correspondence with R. N. Lucas. (Electrician, London, v. 47, 1901, p. 727-728, 766, 805.) **VGA**

103. — The present and future of accumulators. (Electrochemist and metallurgist, London, v. 1, Jan., 1901, p. 14-16.) **† PKA**

Abstracted in Electrical world and engineer, New York, v. 37, Feb. 9, 1901, p. 249, *VGA*.

104. West, John H. Recent progress in accumulator manufacture. illus. (Electrochemist and metallurgist, London, v. 1, March, 1901, p. 70-72, April, 1901, p. 96-99.) **† PKA**

Includes a list of foreign makes with tabulated data.

105. Wray, J. G. The storage battery in telephone work. (Electrical world and engineer, New York, v. 38, Nov. 9, 1901, p. 780-781.) **VGA**

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106. Zacharias, Johannes. Die Akkumulatoren zur Aufspeicherung des elektrischen Stromes deren Anfertigung, Verwendung, und Betrieb. Jena: H. Costenoble, 1901. 724 p. 2. ed. illus. 8°. **Eng. Lib.**

107. Zinc negatives for electric accumulators. (Automotor journal, London, v. 5, Jan., 1901, p. 185-186.) **TOL**

Brief editorial on the difficulties met with.

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108. **Adams, Alton D.** Storage batteries in electrical supply. (Electrical world and engineer, New York, v. 40, Dec. 27, 1902, p. 1032.) **VGA**

Actual plant figures showing the investment in batteries per unit of their greatest output and fixed charges per unit of their energy output.

109. **Bienaimé, G.** Sur le point d'arrêt de la décharge des accumulateurs. (Industrie électrique, Paris, v. 11, May 25, 1902, p. 228-229.) **VGA**

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110. **Brocksmith, J. C.** Design for a high-capacity storage battery. illus. (American electrician, New York, v. 14, June, 1902, p. 286-289.) **VGA**

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111. **Central station batteries.** (Electrical review, London, v. 51, July 4, 1902, p. 13-14.) **VGA**

Indicates general causes of trouble and best methods of dealing with them.

112. **Coho, H. B.** The storage battery as a factor in speed control. (American Institute of Electrical Engineers. Transactions, v. 20, 1902, p. 135-138.) **VGA**

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113. **Concours d'accumulateurs électriques du Ministère de la Marine.** (Industrie électrique, Paris, v. 11, June 25, 1902, p. 277-278.) **VGA**

251 discharge tests on twenty-one different makes.

114. **Delasalle, A.** Sur l'entretien des accumulateurs électriques employés pour la traction. (Électricien, Paris, v. 24, Aug. 23, 1902, p. 122-124.) **VGA**

115. **Dion, A. A.** The use of storage batteries in electric distribution systems. (Canadian engineer, Toronto, v. 9, July, 1902, p. 186-190.) **VDA**

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116. **Dominik, Hans.** Die Akkumulatoren für Elektromobilen auf der Industrie- und Gewerbe-Ausstellung zu Düsseldorf. (Elektrochemische Zeitschrift, Berlin, Jahrg. 9, Dec., 1902, p. 189-195.) **PKA**

117. **Dommerque, J.** Tribelhorn Akkumulator. (Zeitschrift für Elektrochemie, Halle, Jahrg. 8, Aug. 28, 1902, p. 662-664.) **PKA**

118. **Dow, Herbert H.** A zinc-bromide storage battery. (American Electrochemical Society. Transactions, v. 1, 1902, p. 127.) **PKA**

119. **Edison, Thomas A.** The storage battery and the motor car. (North American review, New York, v. 175, July, 1902, p. 1-4.) ***DA**

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120. **Formenti, Carlo.** Bestimmung der Essigsäure in den Bleiaccumulatoren. (Chemiker-Zeitung, Cöthen, Jahrg. 26, Feb. 15, 1902, p. 150-151.) **VOA**

121. **Gabran, Oscar.** Einige Versuche mit Zink-Blei-Akkumulatoren. (Elektrotechnische Zeitschrift, Berlin, Jahrg. 23, June 26, 1902, p. 571-574.) **VGA**

122. **Heilmann, J. J.** Der Akkumulator "Max." illus. (Elektrochemische Zeitschrift, Berlin, Jahrg. 9, Dec., 1902, p. 164-168.) **PKA**

123. **Hering, Carl.** How to determine the best conditions in storage battery practice. (Electrochemical industry, New York, v. 1, Dec., 1902, p. 122-125.) **VIA**

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124. — Point of cut-off in a battery discharge. (American Institute of Electrical Engineers. Transactions, v. 19, 1902, p. 325-331.) **VGA**

125. **Hibbert, W.** The Edison accumulator for motor cars. (Electrical review, London, v. 50, June 6, 1902, p. 932-933.) **VGA**

126. — Influence of temperature on the capacity of accumulators. (Electrical review, London, v. 50, May 30, 1902, p. 883-884.) **VGA**

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127. **Importance of the storage battery.** (Electrical review, New York, v. 40, June 21, 1902, p. 815-816.) **VGA**

An editorial.

128. **Izart, J.** Calcul des batteries à régime variable. (Industrie électrique, Paris, v. 11, April 10, 1902, p. 153-154.) **VGA**

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129. — Emploi des accumulateurs pour la traction sur voies ferrées. (Industrie électrique, Paris, v. 11, Dec. 10, 1902, p. 535-537.) **VGA**

130. — Emploi des accumulateurs sur les voitures électriques. (Électricien, Paris, v. 24, July 5, 1902, p. 11-12.) **VGA**

131. **Joel, Henry F.** The Edison storage battery. (Electrical review, London, v. 50, June 20, 1902, p. 1041-1044.) **VGA**

Analysis of the claims of the Edison patents.

132. **Johnson, Woolsey McA.** The reversible copper oxide plate. illus. (American Electrochemical Society. Transactions, v. 1, 1902, p. 187-193.) **PKA**

An attempt to convert the Lalande primary battery into a secondary cell.

1902, continued.

133. **Kennedy, Rankin.** Accumulators in installations. illus. (In his: Electrical installations... London: Caxton Pub. Co. [1902]. 8°. p. 1-31.) **Eng. Lib.**

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134. **Lewers, Albert M.** Electrode terminology. (Electrical world and engineer, New York, v. 40, July 12, 1902, p. 48.) **VGA**

135. **Liebenow, Karl.** Ueber die Verwendung der Fuchsschen Messmethode in der Akkumulatoren Technik. (Zeitschrift für Elektrochemie, Halle, Jahrg. 8, Aug. 21, 1902, p. 616-623.) **PKA**

136. **Lunn, Ernest.** Curves for showing the available capacity of a lead accumulator. (Electrical review, New York, v. 41, Sept. 27, 1902, p. 406.) **VGA**

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137. **Marsh, Albert L.** Deterioration of storage battery plates. (Electrical world and engineer, New York, v. 40, Sept. 13, 1902, p. 409-411.) **VGA**

138. — The possibilities for a light weight storage battery. (Electrical world and engineer, New York, v. 39, June 7, 1902, p. 996-998.) **VGA**

139. — Self-forming separator in a nickel peroxide storage cell. (Electrical world and engineer, New York, v. 40, Dec. 13, 1902, p. 942-943.) **VGA**

140. — The thallium storage cell. (Electrochemical industry, New York, v. 1, Nov., 1902, p. 88-89.) **VIA**

Describes and compares with the lead cell.

141. **Mugdan, M.** Neuerungen an Nichtblei-Akkumulatoren. (Zeitschrift für Elektrochemie, Halle, Jahrg. 8, May 1, 1902, p. 265-270, May 8, p. 293-294.) **PKA**

142. **Osthoff, Otto E.** The storage battery in central stations. illus. (Central station, New York, v. 1, Feb., 1902, p. 145-150.) **VGS**

143. **Palmer, W. H., the younger.** The storage battery in the commercial operation of electric automobiles. illus. (Electrical world and engineer, New York, v. 39, April 12, 1902, p. 643-647.) **VGA**

Description of the plant of the New York Transportation Company.

144. **Protection** maintenance, and depreciation of storage batteries. (Electrical world and engineer, New York, v. 39, June 21, 1902, p. 1084-1085.) **VGA**

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145. **Rabinowicz, J.** Zur Frage der Lebensdauer und des Gewichtes der Akkumulatoren. (Elektrochemische Zeitschrift, Berlin, Jahrg. 9, Aug., 1902, p. 95-97.) **PKA**

146. **Reed, C. J.** The storage battery as an electrolytic cell. (Electrochemical industry, New York, v. 1, Dec., 1902, p. 127-130.) **PKA**

147. **Reuterdaahl, Arvid.** Electric storage batteries. illus. (Cassier's magazine, London, v. 21, April, 1902, p. 489-502.) **VDA**

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148. **Reyval, J.** L'Etampé accumulateur. illus. (L'éclairage électrique, Paris, v. 31, May 3, 1902, p. 168-170.) **VGA**

Process of manufacture.

149. **Rodman, Hugh.** Storage battery invention. (American Electrochemical Society. Transactions, v. 2, 1902, p. 177-183.) **PKA**

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150. **Roeber, E. F.** A thermodynamical note on the theory of the Edison accumulator. (American Electrochemical Society. Transactions, v. 1, 1902, p. 195-220.) **PKA**

151. **Rucker, S. E.** The application of the storage battery to isolated plants. (American electrician, New York, v. 14, Jan., 1902, p. 7-10.) **VGA**

152. **Schoop, M. U.** Deterioration of storage battery plates. (Electrical world and engineer, New York, v. 40, Oct. 25, 1902, p. 657.) **VGA**

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153. — Explosion in einen deutschen Akkumulatorenfabrik. (Elektrotechnische Zeitschrift, Berlin, Jahrg. 23, Nov. 6, 1902, p. 988.) **VGA**

154. **Shepherd, H. F.** The construction of a small storage cell. (American electrician, New York, v. 14, Feb., 1902, p. 84.) **VGA**
A "home-made" battery.

155. **Some** modern automobile accumulators. illus. (Scientific American, New York, v. 86, May 17, 1902, p. 351-352.) **VA**

156. **Some** results of a secondary battery in a traction station. (Electrical review, London, v. 50, Feb. 14, 1902, p. 247-248.) **VGA**

States conditions to be met and gives costs.

157. **Stebbins, E. Vail.** Storage batteries in mills and factories. illus. (Association of Engineering Societies. Journal, v. 29, July, 1902, p. 1-27.) **VDA**

Extent to which batteries may be installed to equalize the load.

158. **Storage** batteries in the Baltimore Belt Line tunnel power plant. illus. (Electrical world and engineer, New York, v. 39, Feb. 15, 1902, p. 297-299.) **VGA**

159. **The** storage battery in small central stations. illus. (Central station, New York, v. 1, June, 1902, p. 241-245.) **VGS**

Shows how a profitable 24 hour service was obtained at Milan, Mich.

1902, continued.

160. Theory of the Edison nickel-iron cell. (Electrical world and engineer, New York, v. 38, 1902, p. 598-600, 733, 931-932; v. 39, p. 90-91, 132, 232, 312.) **VGA**

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162. Buettner, Max. Die Verwendung des Akkumulators in der Verkehrstechnik. (Glaser's Annalen für Gewerbe und Bauwesen, Berlin, Bd. 52, June 15, 1903, p. 225-240.) **VDA**

163. Coho, H. B. An historical review of the storage battery. (American Electrochemical Society. Transactions, v. 3, 1903, p. 158-168.) **PKA**

164. Combination railway and lighting storage battery at Milwaukee. (Electrical world and engineer, New York, v. 41, June 13, 1903, p. 1023-1025.) **VGA**

165. Dalton, W. A method of milking faulty cells. (Electrical engineer, London, v. 32, Oct. 23, 1903, p. 609.) **VGA**

166. Esch, W. Vierwertiges Blei und die Theorie des Blei-Akkumulators. (Chemiker Zeitung, Cöthen, Jahrg. 27, March 28, 1903, p. 297-298.) **VOA**

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168. Goldsborough, W. E., and P. E. FANSLER. The storage battery in sub-stations. (American Institute of Electrical Engineers. Transactions, v. 22, 1903, p. 243-277.) **VGA**

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170. Hagood, Lee. The storage battery in its relation to United States fortifications. illus. (Journal of the U. S. Artillery, Fort Monroe, Va., v. 20, 1903, p. 70-95.) **VWA**

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171. Hibbert, W. The Edison battery for automobiles. (Electrical review, London, v. 52, Feb. 27, 1903, p. 339-340.) **VGA**

172. — "Edison contra Jungner." (Electrical review, London, v. 52, Jan. 30, 1903, p. 190-191.) **VGA**

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173. Hospitalier, E. L'accumulateur Edison. (Industrie électrique, Paris, v. 12, Nov. 10, 1903, p. 492-497.) **VGA**

Description and results of French tests.

174. Huber, J. L. Der Akkumulator in Bergbau. illus. (Glückauf, Essen, Jahrg. 39, Aug. 8, 1903, p. 753-762.) **VHA**

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176. Izart, J. L'accumulateur et l'électrochimie. (Electricien, Paris, v. 25, 1903, p. 55-57, 86-88, 154-156.) **VGA**

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179. — The Edison accumulator. illus. (Electro-chemist and metallurgist, London, v. 3, Dec., 1903, p. 376-383.) **† PKA**

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Tests to determine relative merits of formed and pasted plates.

195. — Der Jungner-Edison Akkumulator. (Elektrotechnische Zeitschrift, Berlin, Jahrg. 24, Aug. 6, 1903, p. 619-623; Jahrg. 25, May 26, 1904, p. 442.) **VGA**

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197. Sessions, P. L. Storage battery industrial locomotives. (American Institute of Electrical Engineers. Transactions, 1903, v. 22, p. 109-131.) **VGA**

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198. Situation regarding the Edison storage battery. (Electrical review, New York, v. 43, Aug. 8, 1903, p. 198-199.) **VGA**

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202. Wade, E. J. Secondary batteries: their theory, construction and use. London: "Electrician" [1903]. 492 p. illus. 8°. **Eng. Lib.**

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207. Bary, Paul. Théorie des accumulateurs au plomb. (L'éclairage électrique, Paris, v. 40, Sept. 3, 1904, p. 361-366.) **VGA**

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209. **Brueckmann, Ludwig.** Akkumulatoren als Stromquelle für die Mikrophone der Fernsprechstellen. illus. (Elektrotechnische Zeitschrift, Berlin, Jahrg. 25, Sept. 22, 1904, p. 838-841.) **VGA**

210. **Buffa, M.** Piles et accumulateurs à acide gros. (Association des ingénieurs électriques, Liège. Bulletin, v. 4, 1904, p. 255-262.) **Eng. Lib.**

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Accumulators with fatty acid electrolyte.

211. **Coar, Charles H.** Theory and operation of the storage battery. (Western electrician, Chicago, v. 34, Jan. 23, 1904, p. 75.) **VGA**

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212. **Davis, F. M.** Some notes on the Edison nickel-iron storage battery. (Western electrician, Chicago, v. 35, Nov. 12, 1904, p. 392-393.) **VGA**

Comparative data on the Edison and lead cells.

213. **Dieudonné, Émile.** Soins à donner aux batteries d'accumulateurs. (Revue technique, Tours, v. 25, July 25, 1904, p. 754-756, Aug. 25, p. 867-868.) **VA**

Influence of proper care on life and performance.

214. **Donaldson, W. W.** Storage battery plate construction with special reference to high discharge characteristics. (Electrical world and engineer, New York, v. 43, May 21, 1904, p. 977-979.) **VGA**

See also reply by S. H. Rabenault.

215. **Doublet, J. M. Gritters.** Emploi d'un survolteur pendant la décharge d'une batterie. (L'éclairage électrique, Paris, v. 40, July 2, 1904, p. 15-16.) **VGA**

Abstracted in Electrical review, New York, v. 45, July 23, 1904, p. 134, **VGA**.

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Editorial on the discussion following Hibbert's 1903 paper.

217. **Edison storage battery.** illus. (Engineering, London, v. 78, July 1, 1904, p. 1-5.) **VDA**

Describes cell and states conditions Edison has aimed to fulfil.

218. **Edison-Akkumulatoren auf der Weltausstellung in St. Louis.** (Zeitschrift von Deutscher Ingenieure Verein, Berlin, Jahrg. 48, Dec. 3, 1904, p. 1857-1860.) **VDA**

219. **Entz, Justus B.** Storage batteries in electric railway service. (In: International Electrical Congress, St. Louis, 1904. Transactions, v. 3, p. 31-42.) **VGA**

220. **Fernandez, W. T.** Operation of storage batteries and boosters. (American electrician, New York, v. 16, Jan., 1904, p. 52-54.) **VGA**

221. **Finzi.** Edison-Akkumulator. (Zeitschrift für Elektrotechnik, Wien, Jahrg. 22, May 22, 1904, p. 319-320.) **VGA**

Abstract of paper before Associazione elettrotecnica italiana.

222. **Floy, Henry.** A unique storage battery installation. illus. (Electrical world and engineer, New York, v. 44, Aug. 20, 1904, p. 291-292.) **VGA**

Description of plant in a lead mine at St. Francis, Mo.

223. **Goettling, Gerhard.** Storage batteries as an adjunct to central station equipment. (In: International Electrical Congress, St. Louis, 1904. Transactions, v. 2, p. 832-843.) **VGA**

Their development, construction and operation.

224. **Hanchett, George T.** How to make a high voltage testing battery. illus. (American electrician, New York, v. 16, Sept., 1904, p. 466.) **VGA**

225. **Hibbert, W.** The Edison accumulator for automobiles. illus. (Institution of Electrical Engineers, London. Transactions, v. 33, 1904, p. 203-238.) **VGA**

Abstracted in Electrician, London, v. 52, Nov. 27, 1903, p. 201-206, **VGA**.

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226. **Hildebrand, Otto.** Die geschichtliche Entwicklung der Sekundär-Elemente. (Elektrochemische Zeitschrift, Berlin, Jahrg. 11, Aug., 1904, p. 91-95.) **VGA**

Historical development beginning with Gautherot in 1802.

227. **Hobart, Henry M.** Limitations to the use of storage batteries. (Scientific American supplement, New York, v. 58, Dec. 24, 1904, p. 24223-24224.) **VA**

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228. **Hommel, G.** Untersuchung eines Climax-Akkumulator. (Elektrochemische Zeitschrift, Berlin, Jahrg. 11, Nov., 1904, p. 157-165.) **PKA**

Gives data and curves.

229. **Howatt, John.** The care of storage batteries. (Power, New York, v. 24, Nov., 1904, p. 655-656.) **VFA**

230. **Joly, H. L.** New Planté cells. illus. (Electro-chemist and metallurgist, London, v. 3, Jan., 1904, p. 463-464.) **PKA**

Describes the Bainville accumulator and gives tabular comparison of several light traction cells.

231. **Jouaust, R.** L'accumulateur Edison. illus. (L'éclairage électrique, Paris, v. 38, Feb. 6, 1904, p. 201-214.) **VGA**

1904, continued.

232. **Jumau, L.** Les accumulateurs électriques; théorie et technique. illus. Paris: Dunod, 1904. 926 p. 8°. **Columbia**

Very comprehensive on both the theoretical and practical sides.

233. **Jungner** alkaline battery. (Automotor journal, London, v. 9, Feb. 6, 1904, p. 145-146.) **TOL**

Claims that it antedates Edison cell and compares the two types.

234. **Kennelly, A. E., and S. E. WHITING.** The present status of the Edison storage battery. illus. (In: International Electrical Congress, St. Louis, 1904. Transactions, v. 2, p. 135-150.) **VGA**

Also in American Electrochemical Society. Transactions, v. 6, 1904, p. 135-151, **PKA**.

235. **Knowlton, Howard.** Storage battery records in telephone practice. (Electrical world and engineer, New York, v. 44, July 23, 1904, p. 136-137.) **VGA**

236. **Krilitshewsky, Wera.** Zur Kenntniss der Cersulfat-Akkumulators. Halle: C. A. Kaemmerer, 1904. 38 p. 8°. **VGH p.v.1, no.2**

237. **Lejeune, L.** Sur un procédé de formation rapide des accumulateurs électriques au plomb pur. (Électricien, Paris, v. 27, April 16, 1904, p. 245-246.) **VGA**

Various methods for the rapid formation of Planted type plates.

238. **Liagre, Charles.** Les électrodes auxiliaires dans les accumulateurs au plomb. (L'éclairage électrique, Paris, v. 40, Sept. 10, 1904, p. 406-413.) **VGA**

239. **Loppé, F.** Détermination de la capacité maximale maxima d'un accumulateur au plomb. (Industrie électrique, Paris, v. 13, March 25, 1904, p. 125-126.) **VGA**

Theoretically determined to be 53.39 watt-hours per kilogramme.

240. **Lyndon, Edward.** Care and management of storage batteries. (Electrical review, New York, v. 44, p. 131-132, 169-170, 201-202, 249-250, 287-288, 317.) **VGA**

241. — Review of the storage battery industry for 1903. (Electrical review, New York, v. 44, Jan. 9, 1904, p. 70.) **VGA**

General summary.

242. **Measuring** the resistance of secondary batteries. (Electrician, London, v. 52, Feb. 26, 1904, p. 748.) **VGA**

A suggested method.

243. **New storage battery plant** of the Northwestern Elevated Railroad, Chicago. illus. (Street railway journal, New York, v. 24, Aug. 13, 1904, p. 229-231.) **TPB**

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416. **Bonnet, Frederic.** An acid-alkali-proof stain for storage battery shelves. (Electrical world, New York, v. 55, March 10, 1910, p. 625-626.) **VGA**
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417. **Brown, O. W., and W. G. BOWERS.** The self-discharge of Planté and Faure storage batteries. (American Electrochemical Society. Transactions, v. 18, 1910, p. 69-77.) **PKA**
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427. — The 1910 Edison storage battery. illus. (Electrician, London, v. 66, Oct. 21, 1910, p. 47-50, Oct. 28, p. 83-86.) **VGA**
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450. **Walton, Julian.** The storage battery and its application to the electric vehicle. (Electrical review and western electrician, Chicago, v. 56, Feb. 12, 1910, p. 330-332.) **VGA**

451. **Werkner, Richard.** Anwendung von Akkumulatoren in Gleichstrom- und Drehstromzentralen. (Elektrotechnik und Maschinenbau, Wien, Jahrg. 28, Jan. 30, 1910, p. 93-98, Feb. 6, p. 117-119.) **VGA**

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453. **Zehnder, L.** Ueber den Hochspannungs-Akkumulator. (Annalen der Physik, Leipzig, Folge 4, Bd. 33, 1910, p. 641-645.) **PAA**

454. **Zickler, K.** Akkumulatoren. illus. (In his: Lehrbuch der allgemeinen Elektrotechnik... Leipzig: F. Deuticke, 1910. 4°. Bd. 2, p. 434-475.) **VGC**

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455. — **Zur Vorausbestimmung der Grösse und Wirkung von Pufferbatterien.** (Elektrotechnik und Maschinenbau, Wien, Jahrg. 28, July 10, 1910, p. 579-585.) **VGA**

Method of predetermining size of battery to operate in parallel with a generator.

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456. **Accumulators in traction.** (Electrical engineer, London, v. 48, Aug. 11, 1911, p. 155-156.) **VGA**

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457. **Association of Edison Illuminating Companies.** Report on storage batteries. 1911. 64 p. **Eng. Lib.**

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Description of the Edison cell.

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Characteristics of the Edison cell and records of the performance of the car.

460. **Beckmann, H.** Stationary and portable battery practice. (Electrical world, New York, v. 58, Dec. 30, 1911, p. 1589.) **VGA**

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Abstract from a paper before the Turin International Electrical Congress.

461. **Broadfoot, S. K.** Motors, secondary batteries, measuring instruments and switchgear. New York: D. Van Nostrand Company, 1911. 96 p. 16°. **VGM**

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462. **Brunk, O.** Die Verwendung des Edison-Akkumulators in der Elektroanalyse. (Zeitschrift für angewandte Chemie, Berlin, Jahrg. 24, Oct. 20, 1911, p. 1993-1997.) **PKA**

463. **Burk, A. B., the younger.** The various applications of storage batteries. (Cleveland Engineering Society. Journal, v. 4, Sept., 1911, p. 28-45.) **VDA**

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464. **Colvin, Fred H.** The mechanics of the Edison battery. illus. (American machinist, New York, v. 35, Aug. 10, 1911, p. 241-248.) **VFA**

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465. **Crocker, Francis B., and M. ARENDT.** Storage batteries. illus. (In: American School of Correspondence. Cyclopedia of telephony and telegraphy. Chicago, 1911. 8°. v. 3, p. 309-374.) ***R-TTC**

466. **Flanders, L. H.** The new iron-exide battery for electric vehicles. (Franklin Institute. Journal, v. 171, March, 1911, p. 286-294.) **VA**

467. **Ford, Bruce.** The "ironclad-exide" battery. illus. (Central station, New York, v. 10, Feb., 1911, p. 218-226.) **VGS**

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468. **Gump, W. B.** Storage battery plants. (Electrical review and western electrician, Chicago, v. 58, p. 340-341, 393-395, 435-438.) **VGA**

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469. **Holland, Walter E.** Effect of low temperature on the alkali storage battery. (Electrical world, New York, v. 58, Oct. 14, 1911, p. 929-930.) **VGA**

Abstract of paper read before the Electric Vehicle Association.

470. **Hutchison, Miller R.** The Edison storage battery; a series of twenty-five letters addressed to the personnel of the army and navy. Orange, N. J.: Edison Storage Battery Co. [1911.] v. p. illus. f°. **†† VGH**

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473. **Karapetoff, Vladimir.** Electric batteries. illus. (In his: Experimental electrical engineering... for engineers and students. New York: J. Wiley & Sons, 1911. 2. ed. 8°. v. 1, p. 396-424.) **VGC**

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474. **Loppé, F.** Calculs rapides de la densité et du volume de l'électrolyte d'un accumulateur au plomb. (*Industrie électrique*, Paris, v. 20, Feb. 10, 1911, p. 63-64.) **VGA**

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477. **Meade, Norman G.** Care and operation of storage batteries. illus. (Power, New York, v. 33, May 9, 1911, p. 730-733.) **VFA**

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Present status and comparison of Edison and Guoin cells.

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